PERFORMANCE SPECIFICATION SHEET

SWITCH, PUSHBUTTON, ILLUMINATED,

PUSH BUTTONS FOR

(SNAP-IN AND SCREW-IN)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the switches described herein shall consist of this specification and MIL-PRF-22885.
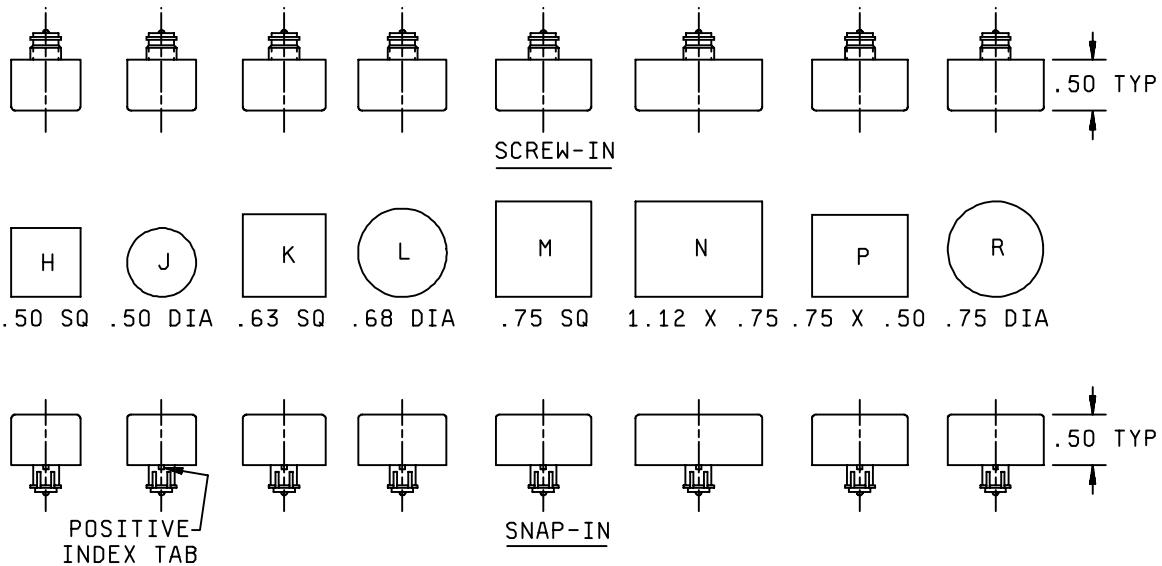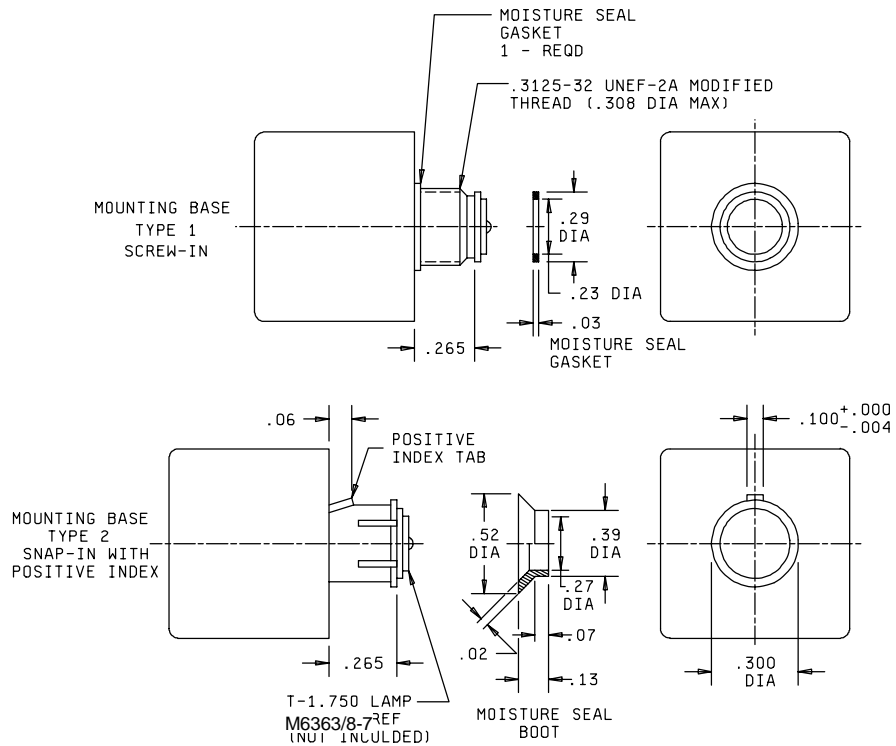
BODY STYLES

SCREW-IN

H	J	K	L	M	N	P	R
.50 SQ	.50 DIA	.63 SQ	.68 DIA	.75 SQ	1.12 X .75	.75 X .50	.75 DIA

.50 TYP

POSITIVE INDEX TAB

SNAP-IN

.50 TYP

FIGURE 1. Push button body styles and mounting base configuration.

Inches	mm	Inches	mm
.004	.10	.29	7.4
.02	.5	.300	7.62
.03	.8	.308	7.82
.06	1.5	.39	9.9
.07	1.8	.50	12.7
.100	2.54	.52	13.2
.13	3.3	.63	16.0
.23	5.8	.68	17.3
.265	6.73	.75	19.0
.27	6.9	1.12	28.4

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ± .010 (0.25 mm) for three-place decimals and ± .02 (0.51 mm) for two-place decimals.
4. The positive index tab configuration is optional. It shall engage the clots in the switch housing to prevent rotation.
5. Moisture seal furnished with push buttons.

FIGURE 1. Push button body styles and mounting base configurations - Continued.
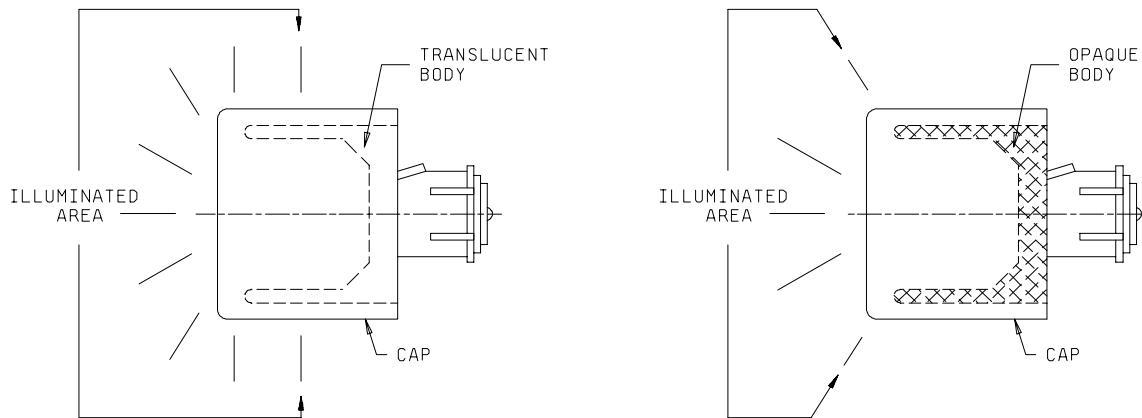
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FIGURE 2. Illuminated area.

REQUIREMENTS:

Dimensions and configuration: See figures 1 and 2, and table I.

Vibration: Grade 2 (10-500 Hz).

Thermal shock: 71°C maximum temperature (nonoperating).

Indexing: The positive index tab (type 2) shall withstand rotational torque up to 2-inch pounds in either direction without damage. Type I push buttons are orientable.

Photometric brightness and color: See table I.

Legend: See application information.

Part or Identifying Number (PIN): M22885/99-(dash number identifying the body style and mounting base (see figure 1) and color combinations of table I).

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                            EXAMPLE:        M22885/99   K    2   14
        Specification sheet number
        
         Body style (see figure 1)

             H = .50 sq.       M = .75 sq.
             J = .50 dia.      N = 1.12 x .75 rect.
             K = .63 sq.       P = .75 x .50 rect.
             L = .68 dia.      R = .75 dia.

        Mounting base (see figure 1)

           1 = Screw-in
           2 = Snap-in (positive index)

        Color combinations (see table I)
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01 through 15 = Color numbers

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TABLE I. Configurations and characteristics.

Color number	Color combinations			Minimum photometric brightness	Color coordinates 1/	
	Cap	Translucent color filter	Body		x ± .04	y ± .04
				Footlamberts		
01	Red-translucent	None	White-translucent	105	.690	.309
02	Green-translucent	None	White-translucent	130	.211	.618
03	Yellow-translucent	None	White-translucent	255	.587	.406
04	Blue-translucent	None	White-translucent	9	.154	.221
05	White-translucent	None	White-translucent	445	.493	.413
06	White-translucent	Red	White-opaque	45	.697	.302
07	White-translucent	Green	White-opaque	30	.196	.614
08	White-translucent	Yellow	White-opaque	160	.592	.402
09	White-translucent	Blue	White-opaque	4	.174	.190
10	White-translucent	Blue-white	White-opaque	175	.419	.409
11	Clear-transparent	Red	Black-opaque	45	.695	.303
12	Clear-transparent	Green	Black-opaque	55	.209	.621
13	Clear-transparent	Yellow	Black-opaque	160	.580	.412
14	Clear-transparent	Blue	Black-opaque	4	.173	.194
15	Clear-transparent	White	Black-opaque	185	.499	.410

1/ The chromaticities of the diffusers or color filters are expressed as "x" and "y" coordinates on the CIE
    chromaticity diagram using a source illuminate of 2,360 K.
2/ Will accept type 5 engraved legend only (see application information).

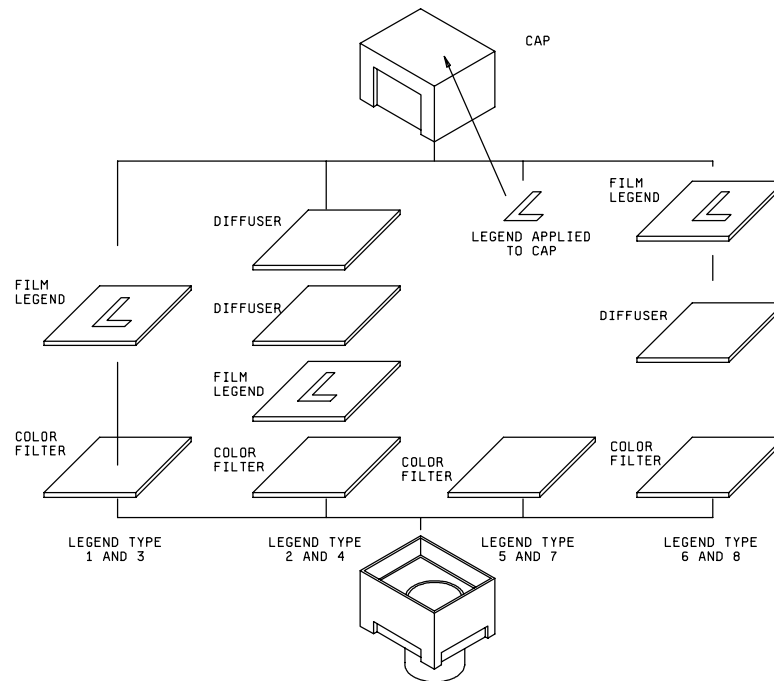
QUALIFICATION INSPECTION:

  Qualification inspection is required as part of the illuminated push button switch covered by MIL-PRF-22885/18.

APPLICATION INFORMATION:

  Legend is not included when ordering push buttons by the military PIN. Push buttons with legends are category II
  items and shall be acquired from a source listed on the qualified products list. Information on available legend
  types, legend construction, and character spacing is given in figure 3 and table II.

INTENDED USE:

  The push buttons shall be capable of mating with push button switches, PIN M22885/18-01 through M22885/18-08
  and M22885/18-149 through M22885/18-156 of MIL-PRF-22885/18. The push buttons shall accommodate one
  midget flange-base T-1-3/4 incandescent lamp. For provisioning purposes and spare parts support, the push
  buttons are not supplied with lamps.

Legend	Nonilluminated		Illuminated	
type	Legend	Background	Legend	Background
1	Black 1/	Translucent white	Black	Color
2	Hidden (not easily discernible) 1/	Translucent white	Black	Color
3	Translucent color 1/	Black	Visible in color	Black
4	Hidden (not easily discernible) 1/	Translucent white	Visible in color	Opaque
5	Black filled engraving on external surface 2/	Translucent color cap	Black	Color
6	Translucent white 1/	Black	Visible	Black
7	White marking on external surface 3/	Matte black	Visible in color	Matte black
8	Black 1/	Translucent white	Black	Color

1/ Film legend.
2/ Engraved black fill on white, yellow, or amber background. White fill on all other colors.
3/ Photo etch or equivalent.

FIGURE 3. Legend types and construction.

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TABLE II. Legend characters.

Maximum character count and number of lines per push button style and character size.
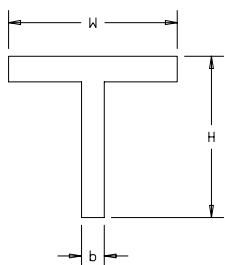
Push button body style (see fig. 1)	A = 10 point				B = 12 point				C = 18 point			
	No. char/line		No. lines		No. char/line		No. lines		No. char/line		No. lines	
	Engrv	Film	Engrv	Film	Engrv	Film	Engrv	Film	Engrv	Film	Engrv	Film
H	4	5	2	2	3	4	1	1	2	3	1	1
J	4	5	2	2	3	4	1	1	2	3	1	1
K	5	7	2	2	4	6	2	2	3	4	2	2
L	5	8	2	2	4	6	2	2	3	4	1	1
M	6	9	4	4	5	7	3	3	3	5	2	2
N	9	11	4	4	7	9	3	3	5	6	2	2
P	6	9	2	2	5	7	1	1	3	5	1	1
R	6	8	3	3	5	7	2	2	3	5	1	1

Film legend = alternate gothic no. 2;
Engraved legend = condensed gorton.
Character height: A = 10 point (approximately .10 inch (2.5 mm));
B = 12 point (approximately .12 inch (3.05 mm)); C = 18 point (approximately .18 inch (4.6 mm)).

	Film legend	Engraved legend
Letter height to width ratio (letter T) - - - - - - - - - - - -	1.66:1	2:1
Line width ratio $\frac{H}{b}$ - - - - - - - - - - - - - - - - -	6:1	8:1